

Commonwealth of Kentucky  
Division for Air Quality  
PERMIT STATEMENT OF BASIS

Conditional Major/Synthetic Minor Draft – No. F-04-022

DESA International  
2701 Industrial Drive  
Bowling Green, KY 42102  
May 1, 2004  
Andrea Riegler, Reviewer  
PLANT I.D. # 21-227-00057  
APPLICATION LOG # 56436

SOURCE DESCRIPTION:

DESA international is an existing source located in Bowling Green, Kentucky, that fabricates metal heating units. The facility is operating under permit number V-99-013 (Revision 1), which expires in August 2004. The plant currently consists of four powder coating booths and several insignificant support activities. V-99-013 also listed two manual spray paint booths; sometime during the life of this permit, DESA completely removed these booths. With their renewal, DESA has applied for a permit to construct two new spray paint booths to replace the booths that had been permanently removed.

COMMENTS:

The Permit Review Branch received a Title V permit renewal/construction application on March 22, 2004 from DESA International. After reviewing the application and speaking with company representatives, it became clear that the original Title V permit was no longer representative of the facility and that several significant changes needed to be made with the next issuance. The changes needed for each point are outlined below:

3-STAGE WASHER

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
06	6	Detrex washer	401 KAR 61:015	06		3-Stage Washer	401 KAR 61:015
10		First state heater	401 KAR 61:015			Combined into 3-Stage Washer above	
11		Second stage heater	401 KAR 61:015			Combined into 3-Stage Washer above	

In the original Title V permit, the washer was listed on the Insignificant Activities list as three separate pieces of equipment: Detrex washer, First Stage Heater and Second Stage Heater. This description is somewhat misleading in that the heaters are integral to the washer. Further, the emissions inventory for this facility incorrectly listed emissions from three heaters and grouped two of them with some of the fuel and solvent storage tanks. Both the emissions inventory and permit have been corrected to show this unit as a single sources of emissions from both natural gas combustion and the washing solution under the description 3-Stage Washer. The combined unit remains an insignificant activity.

### DRYING OVEN

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
07	7	Drying oven	None	07		Drying Oven	401 KAR 61:020

In the original Title V permit, this unit was listed on the Insignificant Activities with no applicable regulations. According the facility representatives, however, this unit does exhaust through a stack to the atmosphere. In the renewal permit, this unit remains an insignificant activity but is subject to 401 KAR 61:020 regulations.

### POWDER COATING BOOTHS

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
na	na	Not listed	None	01-04		Powder Coating Booths	401 KAR 59:010

According to the Division's records, this unit was originally installed in April 1991 and was modified in June 2003. It is unclear why the point was never listed on the previous permit; however, the renewal permit lists this source as an insignificant activity subject to 401 KAR 59:010.

### PAINT SPRAY BOOTHS

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
na	8(a/b)	Spray booths	401 KAR 59:010 401 KAR 63:021 401 KAR 63:060		8(a/b)	Paint Spray Booths	401 KAR 51:017 401 KAR 59:010 401 KAR 59:225 401 KAR 63:002 401 KAR 63:020

The booths and control equipment listed in the original Title V permit were permanently removed from the facility with the intent that all product would pass through the powder coating booths. Removal of these solvent-based paint booths made DESA a Minor Source and would have exempted them from Title V permitting. Shortly after this change had been made, however, DESA discovered that one of the powder coatings would not meet customer standards. DESA made the decision to then revert back to using one solvent-based-paint and to construct two new paint booths: each new booth will house one electrostatic spray gun and will be serviced by dry panel filters for control of particulate emissions.

Since the old paint booths had been completely removed, this modification was treated as a new construction. Emissions calculations showed that this new construction by itself would be subject to PSD requirements and would once again make DESA a Major Source subject to Title V permitting. At

this time DESA opted to take limits on the Paint Spray Booths to exempt them from both Title V and PSD requirements.

In addition to the PSD/Title V issues, the original permit did not include all applicable regulations. At the time of the first Title V permit, this emissions point was subject to 401 KAR 59:225 and 63:002 requirements; these regulations are also applicable to the new construction. Since the issuance of the original permit, the federal government has also promulgated a new Surface Coating MACT (incorporated by reference in 401 KAR 63:020) that applies to this source. By taking limits to preclude Title V and PSD requirements, however, DESA will also be exempt from the MACT.

#### BAKE OFF OVEN

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
09	9	Bake oven	None		8(a/b)	Bake-Off Oven	None

No changes between original and new permit.

#### ASSEMBLY/PRODUCTION TESTING FUEL TANK

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
10	10	2000 gallon kerosene and #2 fuel oil tank	None		10	Assembly/Production Testing Fuel Tank – 2000 gallons capacity	401 KAR 59:050

In the original Title V permit, this point was incorrectly listed. The tank holds only kerosene and, based on the size, 401 KAR 59:050 is the applicable regulation.

#### XYLENE STORAGE

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
11	11	2000 Gallon xylene storage tank	None		11	Xylene storage	

When the original solvent-based paint booths were removed, this point was converted into and remains an air conditioner blow-down tank. Because the new booths will not be in operation that often, DESA will continue to store one 55 gallon drum of xylene on site for use as a clean-up solvent.

#### ENGINEERING LAB FUEL TANKS (2)

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
12	12	1000 gallon kerosene and #2	None		12	Engineering Lab Fuel Tanks (2) –	401 KAR 59:050

	fuel oil tank		1000 gallon capacity each
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In the original Title V permit, this point was incorrectly listed. There are actually two tanks, each able to hold 1000 gallons of #2 fuel oil each. Based on the size of the tanks, 401 KAR 59:050 is an applicable regulation.

#### PAINT HOOK CLEANING OVEN

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
13	13	Paint hook cleaning oven	401 KAR 59:010		13	Paint Hook Cleaning Oven	401 KAR 59:010

In the original KEIS emissions inventory, emissions from this point were incorrectly calculated. Emissions from this point have been estimated using stack test results from the manufacturer, which are guaranteed.

#### ASSEMBLY LINES

Permit #: V-99-013				Permit #: F-04-22			
EIS ID#	Plant ID#	Description	Regulation	EIS ID#	Plant ID#	Description	Regulation
14	14	7kW generator line	None	Permanently dismantled			
15	15	10kW generator line	None	No longer in operation			

These points have been removed from DESA's plant-wide total emissions.

#### APPLICABLE REGULATIONS:

EIS ID#	Plant ID#	Permit #: F-04-22	
		Description	Regulation
	6	3-Stage Washer	401 KAR 61:015
	7	Drying Oven	401 KAR 61:020
	1-4	Powder Coating Booths	401 KAR 59:010
	8(a/b)	Paint Spray Booths	401 KAR 51:017 401 KAR 59:010 401 KAR 59:225 401 KAR 63:002 401 KAR 63:020
	9	Bake-Off Oven	None
	10	Assembly/Production Testing Fuel Tank – 2000 gallons	401 KAR 59:050
	11	Xylene Storage	
	12	Engineering Lab Fuel Tanks (2) – 1000 gallons each	401 KAR 59:050
	13	Paint Hook Cleaning Oven	401 KAR 59:010

#### EMISSION AND OPERATING CAPS DESCRIPTION:

1. For EP 08 (a/b), volatile organic compound (VOC) emissions shall not exceed 84 tons per year based on a 12 month rolling total to preclude a major source Title V review, PSD applicability and to exempt the source from the requirements of 401 KAR 59:225.
2. For EP 08(a/b), hazardous air pollutants (HAPS) emissions shall not exceed 9.5 tons per year individually and 22.5 tons per year combined based on a rolling 12-month rolling total to preclude a major source Title V review, PSD applicability and to exempt the source from the requirements of 401 KAR 63:002 and 63:020.
3. For EP 08 (a/b), the dry panel filters shall be inspected, maintained and operational in accordance with manufacturer's guidelines at all times.

#### CREDIBLE EVIDENCE:

This permit contains provisions that require that specific test methods, monitoring or record keeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations